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4. (Amended) A porous element comprising:  
a porous medium of sintered inorganic particles; and  
a porous substrate, at least a portion of the sintered inorganic particles being disposed within pores of the porous substrate mechanically interlocking the porous medium and the porous substrate, wherein the porous element has a porosity of about 50% or more.

5. (Amended) A process for making a porous element comprising:  
contacting a porous substrate with a slurry including a liquid medium and inorganic particles; and  
sintering the inorganic particles together within pores of the porous substrate to mechanically interlock the sintered inorganic particles to the porous substrate and form a porous element having a porosity of about 50% or more.

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8. (Amended) A porous medium comprising:  
a mass of sintered inorganic particles having a porosity of 70% or more.

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9. (Amended) A method comprising:  
forming a mixture including at least a liquid medium, a plurality of inorganic particles having a nominal first size and a plurality of inorganic particles having a nominal second size, said first size being less than the second size; and  
sinter bonding the plurality of inorganic particles having a nominal first size and the plurality of inorganic particles having a nominal second size together to form a porous medium having a porosity of about 50% or more.

10. (Amended) A porous medium comprising:  
a first plurality of inorganic regions having a first nominal size;  
a second plurality of second inorganic regions having a second nominal size, wherein the first nominal size is less than the second nominal size, and wherein the first plurality of inorganic regions is interspersed between the second plurality of inorganic regions; and  
a plurality of bonds interposed between the first plurality of inorganic regions and the second plurality of inorganic regions, wherein the porous medium has a porosity of about 50% or more.

11. (Amended) A mold apparatus comprising:  
a mold cavity arranged to contain a slurry including inorganic particles;  
a first die arranged to press a first portion of the slurry in the mold cavity; and a  
second die arranged to separately press a second portion of the slurry in the mold  
cavity, wherein the first die and the second die separately press the first portion and the  
second portion, respectively, to provide first and second portions of inorganic particles  
having predetermined densities.

Add the following claims:

12. The porous medium of claim 2 further comprising a third portion, wherein the porous  
medium has a generally hat-shaped configuration, the first portion forming a brim of the hat-  
shaped configuration, the second portion and the third portion forming a crown of the hat-shaped  
configuration, the portions having substantially similar porosities.

13. The porous medium of claim 3 wherein the porous medium has a generally hat-shaped  
configuration and wherein the body portion and the end portion form a crown of the hat-shaped  
configuration, the porous medium further comprising a flange portion forming a brim of the hat-  
shaped configuration wherein the flange portion, the body portion and the end portion comprise  
a unitary structure and the portions have substantially similar porosities.